

CLAIMS

1. A hairdryer comprising a housing defining an air passage; a battery adapted to power a motor; a fan driven by the motor to drive air down the air passage; a burner in the air passage to heat the air flowing through the passage; a conduit providing combustible gas flow to the burner; a regulator to control the gas flow between no-flow, minimum-flow and maximum-flow levels; wherein the hair dryer has at least three modes of operation: in a first of which it is off, and said regulator prevents any flow of gas; in a second of which said regulator permits gas to flow at a normal level between said minimum and maximum levels, whereby ambient air at 20C flowing past the burner is heated to at least 40C; and in a third of which said regulator permits gas to flow at said minimum level, whereby ambient air at 20C flowing past the burner is heated to no more than 30C.
2. A hairdryer comprising a housing defining an air passage; a battery adapted to power a motor; a fan driven by the motor to drive air down the air passage; a burner in the air passage to heat the air flowing through the passage; a conduit providing combustible gas flow to the burner; a regulator to control the gas flow between no-flow, minimum-flow and maximum-flow levels; wherein the hair dryer has at least three modes of operation: in a first of which it is off, and said regulator prevents any flow of gas; in a second, normal mode, said regulator permits gas to flow at a normal level between said minimum and maximum levels, whereby ambient air flowing past the burner is heated to a hair drying temperature; and in a third cool shot mode, said

regulator permits gas to flow at said minimum level, whereby ambient air flowing past the burner is not significantly heated but sufficient gas is supplied to keep said burner alight.

5

3. A hairdryer as claimed in claim 1 or 2, in which said normal level is said maximum-flow level.

10

4. A hairdryer comprising: a housing defining an air passage; a battery adapted to power a motor; a fan driven by the motor to drive air down the air passage; a burner in the air passage to heat the air flowing through the passage; a manifold for connection of a removable gas canister; a conduit providing combustible gas flow to the burner from the manifold when a canister is connected thereto; a solenoid; a valve in the conduit operated by the solenoid; electronic control means pulsing the solenoid between on and off positions of the valve, wherein said control means is adapted to adjust the period of said respective on and off positions between conditions of no-flow and maximum-flow of gas in the conduit.

15

5. A hairdryer as claimed in claim 4, in which said control means also provides a minimum-flow level of gas intermediate said no-flow and maximum-flow levels.

20

6. A hairdryer as claimed in claim 5, and as claimed in any of claims 1 to 3, in which said regulator comprises said solenoid actuated valve and said control means.

35

7. A hairdryer as claimed in claim 4, 5 or 6, in which a flow restrictor is provided in the conduit adjacent to the burner and remote from the valve, so that a

substantially constant gas pressure subsists downstream of the restrictor for all flows of gas.

8. A hairdryer as claimed in any of claims 4 to 7,
5 further comprising a gas canister having an outlet valve in its outlet, and in which said manifold comprises an inlet having a port for connection to said gas canister and adapted to open said outlet valve on connection of the canister to the hairdryer.

10

9. A hairdryer comprising: a housing defining an air passage; a battery adapted to power a motor; a fan driven by the motor to drive air down the air passage; a burner in the air passage to heat the air flowing through the passage; a manifold for connection of a removable gas cartridge; valve openers in the manifold; a conduit providing combustible gas flow to the burner from the manifold; a valve in the conduit to control flow of gas in the conduit between no-flow and maximum-flow conditions; a cartridge receptacle; and a first coupling part on the housing, and wherein said gas cartridge comprises: a plurality of gas canisters disposed in side-by-side relation, each canister being substantially cylindrical with a neck at one end terminating in an outlet valve; alignment means comprising neck rings and an end cap, wherein the neck rings bind the necks of the canisters together and the cap secures the bases together; and a second coupling part on the cap, wherein the first and second coupling parts engage one another on insertion of the cartridge in said receptacle and engagement of said outlet valves with said valve openers in the manifold whereby a fluid connection is made between the interior of the canisters and said manifold, said coupling parts retaining the cartridge in position and said cap

35

closing said receptacle.

10. A hairdryer as claimed in claim 9, and as claimed in any of claims 1 to 8.

5

11. A hairdryer as claimed in claim 9 or 10, in which said cap on the base of the cartridge forms an integral component of the housing, which component is renewed each time the gas cartridge is exchanged.

10

12. A hairdryer as claimed in claim 9, 10 or 11, in which said housing comprises: a tubular body that has a longitudinal axis an open front end, the body housing the fan, motor and burner and having a depending pistol-grip handle that houses said battery and control means for said valve, wherein said receptacle is disposed beneath the tubular body in front of the handle and aligned so that the canisters in the cartridge are substantially parallel to said longitudinal axis when they are engaged in said receptacle, said cap facing the front of the hairdryer.

15
20

13. A hairdryer as claimed in any preceding claim, further comprising safety controls, wherein the gas supply is interrupted in the event of detection of over-temperature and/or under-temperature of the burner.

25
30

14. A hairdryer as claimed in claim 13 when dependent on claim 1, 2 or 3, in which said safety control is disabled in respect of under-temperature while said cool shot function is operating.

35

15. A handheld portable implement comprising a tubular body having a longitudinal axis and a depending pistol-

grip handle, wherein components of the implement are housed within the tubular body and handle, and wherein the tubular body comprises two cup elements mating in a direction substantially parallel said longitudinal axis, and said handle comprises two clamshells mating in a direction substantially perpendicular said axis, the clamshells each having an extension which at least partially surrounds and connects to one or both of said cup elements.

10

16. An implement as claimed in claim 15, in which a frame element is received in the body mounting components of the implement, wherein the frame element has bosses engaged by fasteners passing through one cup element and connecting the clamshells to the cup element.

15 17. An implement as claimed in claim 16, in which fixing locations are also provided on the frame element to connect one or both cup elements thereto.

20 18. An implement as claimed in claim 15,16 or 17, in which said handle forms a loop having a front part and a rear part and offering different holding options for a user of the implement.

25 19. A hairdryer as claimed in any of claims 1 to 14, comprising a hand implement as claimed in any of claims 15 to 18, in which said cup elements are open at each end to permit said airflow into and out of the hairdryer.

30 20. A hairdryer as claimed in claim 19, in which said motor, fan and burner are mounted in line on said frame element.

21. A gas cartridge for a hairdryer as claimed in claim 9, 10 or 11, or claims 12, 13, 19 or 20 when dependent on claim 9, which gas cartridge comprises: a plurality of gas canisters disposed in side-by-side relation, each canister being substantially cylindrical with a neck at one end terminating in an outlet valve; alignment means comprising neck rings and an end cap, wherein the neck rings bind the necks of the canisters together and the cap secures the bases together; and a coupling part on the cap.

10

22. A hairdryer, substantially as hereinbefore described in different embodiments with reference to 15 the accompanying drawings.